

What is claimed is:

1. A print data providing apparatus for providing an external device with a print document consisting of a plurality of print data files described in different formats, the print data providing apparatus comprising:

an archiving unit operable to archive the plurality of the print data files into a file; and

an output unit operable to output the archived file to the external device.

2. The print data providing apparatus according to Claim 1, wherein the archiving unit archives the plurality of the print data files into the file after changing a name of one print data file of said plurality of the print data files to a specified name, said print data file being required in the first place by a printing apparatus in order to print the print document.

3. The print data providing apparatus according to Claim 1, wherein the archiving unit archives one print data file of the plurality of the print data files in a specified position in the archived file, said print data file being required in the first place by a printing apparatus in order to print the print document.

4. The print data providing apparatus according to Claim 1, wherein the output unit transmits to the external device information on a format of the archived file and a format of the print data files that are archived into the file.

5. The print data providing apparatus according to Claim 1, wherein the archiving unit archives the plurality of the print data files in a Tar Ball format.

6. The print data providing apparatus according to Claim 1,
wherein the archiving unit archives the plurality of the print
data files in a MIME format.

5 7. The print data providing apparatus according to Claim 1,
wherein the archiving unit archives the plurality of the print
data files in a compressed format.

8. The print data providing apparatus according to Claim 1,
10 further comprising:

a receiving unit operable to receive the plurality of the print
data files via a transmission line; and

a first determination unit operable to determine whether or
not the received plurality of the print data files compose a single
15 print document,

wherein the archiving unit archives said plurality of the print
data files into a file when it is determined that said plurality of the
print data files compose the print document as a result of the
determination.

20 9. The print data providing apparatus according to Claim 1,
further comprising:

a receiving unit operable to receive the plurality of the print
data files via a transmission line;

25 a first determination unit operable to determine whether or
not the received plurality of the print data files compose a single
print document; and

a second determination unit operable to determine whether or
not said received print data files is archive data,

30 wherein the archiving unit archives the print data files into a
file when the second determination unit determines that said print
data files are not archive data and the first determination unit

determines that said print data files are a plurality of print data files composing a single print document.

10. The print data providing apparatus according to Claim 1,
5 wherein the external device is a printing apparatus connected to the print data providing apparatus via a transmission line, and the output unit transmits the archived file to the printing apparatus.

10 11. The print data providing apparatus according to Claim 1, wherein the external device is a removable storage medium mounted on the print data providing apparatus.

12. A print data providing apparatus for providing a printing
15 apparatus connected to the print data providing apparatus via a transmission line with a print document consisting of a plurality of print data files described in different formats, the print data providing apparatus comprising a sequential transmission unit operable to sequentially transmit to the printing apparatus said
20 plurality of the print data files accompanied by information indicating that said plurality of the print data files to be transmitted are the print data files composing the print document.

13. The print data providing apparatus according to Claim 12,
25 wherein the information is attached to one print data file to be transmitted in the first place, of the plurality of the print data files to be transmitted.

14. The print data providing apparatus according to Claim 12,
30 wherein the information contains information on a format of the plurality of the print data files to be transmitted and a method of push transmitting said plurality of the print data files to the printing

apparatus.

15. The print data providing apparatus according to Claim 12,
wherein the sequential transmission unit transmits
5 sequentially the plurality of the print data files accompanied by
information on a total number and a transmitting order of said
plurality of the print data files composing the print document.

16. The print data providing apparatus according to Claim 12,
10 wherein the sequential transmission unit transmits the
plurality of the print data files accompanied by a flag indicating a
completion of the transmission, attached to one print data file to be
transmitted in the last place, of said plurality of the print data files
composing the print document.

15 17. The print data providing apparatus according to Claim 12,
wherein the sequential transmission unit sequentially
transmits further the plurality of the print data files accompanied by
information indicating a format of one print data file that is presently
20 transmitted, of said plurality of the print data files.

18. The print data providing apparatus according to Claim 17,
wherein the sequential transmission unit sequentially
transmits the plurality of print data files with a data name
25 presenting a format of each of said plurality of the print data files.

19. The print data providing apparatus according to Claim 17,
wherein the sequential transmission unit sequentially
transmits the plurality of the print data files accompanied by a
30 header indicating a format of each of said plurality of the print data
files.

20. The print data providing apparatus according to Claim 12,
wherein the sequential transmission unit firstly transmits one
print data file of the plurality of the print data files, said print data
file being required in the first place by the printing apparatus in
5 order to print the print document.

21. The print data providing apparatus according to Claim 12,
further comprising:

10 a receiving unit operable to receive the plurality of the print
data files via the transmission line; and

a determination unit operable to determine whether or not
the received plurality of the print data files compose the print
document, and

15 wherein the sequential transmission unit sequentially
transmits the plurality of the print data files, to the printing
apparatus, accompanied by information indicating that said plurality
of the print data files are the print data files composing the print
document when it is determined that said plurality of the print data
files compose the print document as a result of the determination.

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22. A printing apparatus for acquiring a print document from a
print data providing apparatus connected to the printing apparatus
via a transmission line, and for printing the acquired print document,
the printing apparatus comprising:

25 an acquisition unit operable to acquire an archived file from
the print data providing apparatus, said archived file being an
archive of a plurality of print data files described in different formats,
said plurality of the print data files composing a print document;

30 an expansion unit operable to expand the acquired archived
file into each of said plurality of the print data files; and

a print unit operable to print a print document, a combination
of each of the expanded print data files.

23. The printing apparatus according to Claim 22,

wherein the print unit further includes an analysis unit operable to analyze one specified print data file of the expanded print data files and combine each of said expanded print data files so that a print picture presented by each of said expanded print data files may compose a single print document, and prints each of said expanded print data files according to the combination made by the analysis unit.

24. The printing apparatus according to Claim 23,

wherein the analysis unit analyzes one print data file of the expanded print data files, having a specified name, and combines each of said expanded print data files.

25. The printing apparatus according to Claim 23,

wherein the analysis unit analyzes one print data file of the expanded print data files, and combines each of said expanded print data files, said one print data file being archived in a specified position in the archived file.

26. A printing apparatus for acquiring a print document from a print data providing apparatus connected to the printing apparatus via a transmission line, and for printing the acquired print document,

wherein the print document consists of a plurality of print data files described in different formats, and

the printing apparatus comprises:

a sequential acquisition unit operable to sequentially acquire, from the print data providing apparatus, the plurality of the print data files accompanied by information indicating that said plurality of the print data files compose the print document; and

a print unit operable to detect, based on the information, that

the acquisition of said plurality of the print data files composing the single print document is complete, and print the print document being a combination of each of the acquired print data files.

5 27. The printing apparatus according to Claim 26,
wherein the sequential acquisition unit sequentially acquires the plurality of the print data files accompanied by information indicating a total number and a transmitting order of said plurality of the print data files composing the print document, and
10 the print unit detects, based on the information, that the acquisition of the total number of the print data files is complete, and prints the print document.

28. The printing apparatus according to Claim 26,
15 wherein the sequential acquisition unit acquires the plurality of the print data files composing the print document accompanied by a flag indicating a completion of a transmission of said plurality of the print data files, and
the print unit detects that the acquisition of the print data
20 files is complete based on the flag, and prints the print document.

29. A print data generating apparatus for generating print data files so that a printing apparatus may print a print document consisting of a plurality of print data files described in different formats, the print data generating apparatus comprising an
25 archiving unit operable to archive the plurality of the print data files into a file after the printing apparatus changes a name of one print data file of said plurality of the print data files to a specified name, the said one print data file being required of in the first place by the printing apparatus in order to print the print document.

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30. A print data generating apparatus for generating print data files so that a printing apparatus may print a print document

consisting of a plurality of print data files described in different formats, the print data generating apparatus comprising an archiving unit operable to archive one print data file of said plurality of the print data files in a specified position in an archived file, said one print data file being required of in the first place by the printing apparatus in order to print the print document.

31. A print system comprising a print data providing apparatus and a printing apparatus mutually connected via a transmission line, the print data providing apparatus includes:
an archiving unit operable to archive a plurality of print data files described in different formats into a file, said plurality of the print data files composing a print document; and
a transmission unit operable to transmit the archived file to the printing apparatus, and
the printing apparatus includes:
an acquisition unit operable to acquire, from the print data providing apparatus, the archived file being an archive of a plurality of print data files described in different formats, said plurality of the print data files composing the print document;
an expansion unit operable to expand the acquired archived file into each of said plurality of the print data files; and
a print unit operable to print the print document, a combination of each of the expanded print data files.

32. A print system comprising a print data providing apparatus and a printing apparatus mutually connected via a transmission line, the print data providing apparatus includes:
a sequential transmission unit operable to transmit, to the printing apparatus, each print data file accompanied by information indicating that a plurality of the print data files to be transmitted compose a single print document, and

the printing apparatus includes:

a sequential acquisition unit operable to sequentially acquire a plurality of print data files described in different formats accompanied by information indicating that said plurality of the print data files compose a single print document; and

a print unit operable to print the print document being a combination of each of the acquired print data files, after all the plurality of the print data files composing a single print document are acquired.

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33. A print data transmission method for a print system comprising a print data providing apparatus and a printing apparatus mutually connected via a transmission line,

wherein the print data providing apparatus includes the steps of:

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archiving a plurality of print data files described in different formats into a file, said plurality of the print data files composing a print document; and

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transmitting the archived file to the printing apparatus, and the printing apparatus includes the steps of:

acquiring, from the print data providing apparatus, the archived file being an archive of a plurality of print data files described in different formats, said plurality of the print data files composing a print document;

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expanding the acquired archived file into each of the print data files; and

printing the print document being a combination of each of the expanded print data files.

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34. A print data transmission method for a print system comprising a print data providing apparatus and a printing apparatus mutually connected via a transmission line,

wherein the print data providing apparatus includes a sequential transmission step of sequentially transmitting, to the printing apparatus, each print data file accompanied by information indicating that a plurality of print data files to be transmitted
5 compose a single print document, and

the printing apparatus includes the steps of:

acquiring sequentially, from the print data providing apparatus, a plurality of print data files described in different formats accompanied by information indicating that said plurality of
10 the print data files compose a single print document;

printing the print document, a combination of each of the acquired print data files, after all the plurality of the print data files composing a single document are acquired.

15 35. A program for a print data providing apparatus for providing an external device with a print document consisting of a plurality of print data files described in different formats, the program comprising the steps of:

archiving said plurality of the print data files into a file and
20 outputting the archived file to the external device.

36. A program for a data providing apparatus for providing an external device with a print document consisting of a plurality of print data files described in different formats, the program
25 comprising a sequential transmission step of sequentially transmitting, to the external device, said plurality of the print data files accompanied by information indicating that said plurality of the print data files to be transmitted compose the print document.

30 37. A program for a printing apparatus for acquiring a print document from a print data providing apparatus connected to the printing apparatus via a transmission line, and for printing the

acquired document, the program comprising the steps of:

acquiring, from the print data providing apparatus, an archived file being an archive of a plurality of print data files described in different formats, said plurality of the print data files
5 composing a print document;

expanding the acquired archived file into each of said plurality of the print data files; and

printing the print document being a combination of each of the expanded print data files.

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38. A program for a printing apparatus for acquiring a print document from a print data providing apparatus connected to the printing apparatus via a transmission line, and for printing the acquired print document, wherein the print document consists of a
15 plurality of print data files described in different formats, the program comprising the steps of:

acquiring sequentially, from the print data providing apparatus, said plurality of the print data files accompanied by information indicating that said plurality of the print data files
20 compose a single print document; and

detecting, based on the information that the acquisition of the plurality of the print data files composing the single print document is complete, and printing the print document being a combination of each of the acquired print data files.

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